VEI Data Warehouse

Objectives

Create a secure self service data mart that can be easily accessed by VEI personnel that is flexible and intuitive for ad hoc report generation, statistical trend/historical analysis, and auditing purposes for all emissions data collected by the vendor.

1) Have the vendor develop a data warehouse that captures emissions data through a secure Internet connection using https.

2) The Data Warehouse must be able to load/transfer data from and to other sources.

3) Build a Self-service ad hoc reporting and analysis tool that has a web-based interface.

4) All data captured by the vendor should be available to VEI via the data warehouse for reporting, analysis and auditing purposes.

Anticipated Benefits

1) Improved Data Quality
2) Timely Information
3) Flexible Data Analysis
4) Standard Reporting measures
5) Provide basic and advanced business intelligence
6) Provide an intuitive reporting solution
7) Ensure quick access to information
8) Self Service Reporting

Statistical Trend/Historical Analysis Requirements

1) All emissions data captured by the vendor should be loaded into the data warehouse for analysis and auditing purposes. Analysis and auditing capabilities should be included that can perform an evaluation of test station performance and assist in the identification of improper or incorrect testing of vehicles.

2) Allow the user to drill down to the lowest level of detail by querying for any emissions data elements using;
    a) filters
    b) sort capabilities
    c) exporting to various applications (i.e. Microsoft products)
    d) provide ability to select detail or summary level reports.

3) Provide an optimized environment that allows simple queries to run within 15 seconds or less.

Reporting Requirements

1) Provide the ability to run user defined reports from a reporting menu containing data stored in the data warehouse. Ad-hoc reporting capabilities should include the ability to use:
    a) filters
    b) sort capabilities
    c) export to various applications (i.e. Microsoft products)
    d) provide ability to select detail or summary level reports.

2) Capable of storing at least 10 years of historical data for reporting purposes

3) Data older than 10 years must be archived and available for use.

4) Provide security for access to reports and at the data levels.

5) Provide storage capability to save and store final report formats.

6) All reports generated in the data warehouse must be delivered to a web based application for:
    a) Review
    b) Updating
    c) Printing
    d) Exporting

7) Provide the capability to download reports and data in a variety of format:
    a) Microsoft Products
    b) PDF
    c) E-mail

Other Requirements

1) Service Levels
    a. New requests
        i. 12 hour response time
    b. Customer Service
        i. Email support
        ii. Telephone support
    c. Technical Support
        i. 1 hour response time
    d. Scheduled Downtime
        i. One week notice for scheduled downtime
        ii. Immediate notification for emergency outages

2) Refresh Frequency
    a. Nightly refresh and available by 5:00 AM (Arizona Time Zone)

3) Uptime
    a. 5:00 AM – 10:00 PM Monday thru Sunday (Arizona Time Zone)

4) Secure nightly data backup procedures
5) Supply and support two desktop computers to enable VEI staff to download and manipulate large data sets for customized analysis, auditing, and report creation.
    a. 80 GB hard drive
    b. 19 inch monitor
    c. 2 GB RAM (memory)

Functional Requirements

Upon vendor selection, it is required that the vendor conduct a thorough and detailed assessment of VEI's reporting and analysis requirements.

1) Ad Hoc Analysis, Reports, and Graphs
2) Standard Reports
3) Save Reports
4) Save Graphs
5) Data Dictionary
6) Save to Microsoft Products
7) Free Form SQL Tool
8) Online Help
9) Administration
    a. Add user
    b. Delete user
    c. Change password
10) Auto timeout functionality
11) Real-time Emission Test Inquiry
    a. By VIN
    b. By License Plate Number
    c. By Station
    d. By Date
12) Public Access via ADEQ's web site
    a. allow the public to view vehicle inspection emissions history by Vehicle Identification Number (VIN)
    b. allow the public to print the vehicle emissions inspection history in PDF format
    c. allow the public to view and print in PDF format the I/M147 driving trace with SEC by SEC emissions for the last failing inspection report.
    d. allow the public to view and print in PDF format the last Vehicle Inspection Report (VIR) for the prior 90 days.

ADEQ Recommended Technical Architecture

This technical architecture is comparable to what ADEQ would build in house to support VEI's reporting and analysis requirements. This is a guide and a recommended solution, but is not the only architecture that could support VEI's need. When responding to the RFP, a detailed technical specifications will need to be submitted and a copy of the computer and communications security policy. If any work will be contracted, policy regarding contractor adherence to corporate policy will also be required.

1. Statements regarding the following specific protection points, if not covered in the policy above:

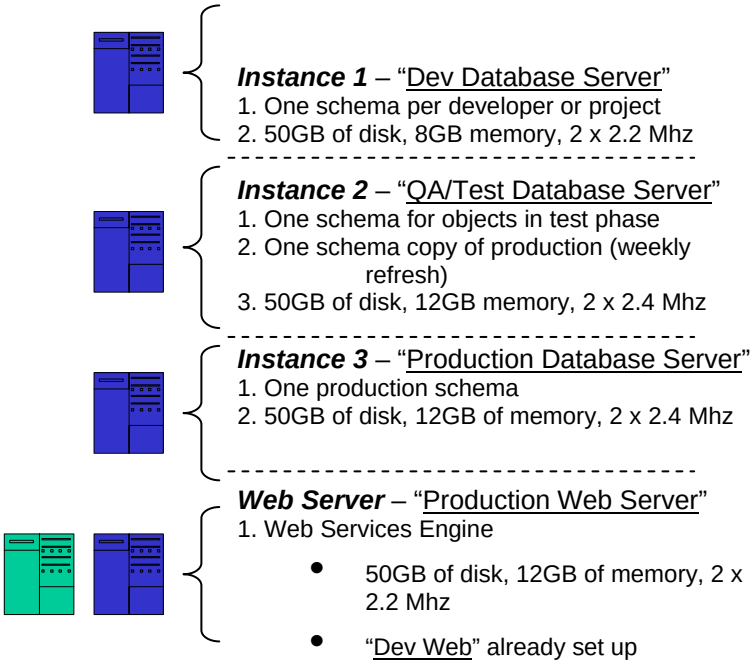
    a. Firewall.
    b. Virus Scanning.
    c. Intruder protection.

d. Acceptable use policy for computer resources and network.
e. Indicators that these standards are enforced.
f. Data Encryption policy.
g. Data access policy.
h. How our data will be protected from theft, modification, and corruption.
i. Staffing of the security function, including points about experience and certification, and also job description.

3. ADEQ is required to meet Federal standards for data protection and encryption, as presented in CROMERR (Cross Media Electronic Reporting Rule).

4. Additional information relative to security that the vendor wants to provide.

Hardware **3 Tier Database Environment**



Disk
- 2 terabytes of data storage
- Plus ample OS and application storage (all mirrored)

Processing
- 4 HP Blade servers
  - 2 Dual Core AMD® Opteron™ 280 2.4GHz Processors
    - 32 GB RAM
    - 1 for Production, 1 for QA/Test
  - 2 Dual Core AMD ® Opteron™ 275 2.2GHz Processors
    - 16 GB RAM
    - 1 for Development, 1 for Web Server

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Database

- Oracle
- 200 useable gigabytes per tier